

Serial Nr.: 10/772,929
Art Unit: 2874

04116-UPS

AMENDMENTS TO THE SPECIFICATION:

Page 4, amend paragraph [0009] as:

[0009] The present invention is a light coupling and alignment design based on a silicon optical bench. By combining the optical characteristics of each optical element and SiOB production technology, the present invention provides a bi-directional transceiver module that is capable of processing multiple wavelengths. The first object of the present invention is to provide a bi-directional transceiver module based on a silicon optical bench, comprising at least a laser diode, at least a signal detector, at least a thin film filter, at least an optical lens, a groove, an optical fiber, and a silicon optical bench. The present invention utilizes a silicon wafer as a substrate, and utilizes an optical fiber and grooves etched by semiconductor etching process for guiding light. The present invention does not utilize the planar light circuit fabrication process to achieve the planar light guiding. The thin film filter can selectively reflect the optical signals of a specific wavelength to the other direction, and let the rest pass. By adjusting the reflection angle, the optical signals can be reflected to a specific location. Therefore, the thin film filter can separate optical signals of different wavelengths, and the present invention can be used as a WDM. The thin film filter must be placed between the laser diode or the signal detector and the optical fiber. The optical lens and the optical fiber can be combined to improve the light coupling efficiency of the optical signal emitted from the laser diode on its transmission path. The optical lens must be placed between the laser diode and the optical fiber. The signal detector is for receiving the optical signal of different wavelength transmitted from the other end.

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Page 10, amend paragraph [0036] as:

[0036] [[file]] While the invention has been described in connection with what is presently considered to the most practical and preferred embodiment, it is to be understood that the invention is not to be limited to the disclosed embodiment, but, on the contrary, it should be clear to those skilled in the art that the description of the embodiment is intended to cover various modifications and equivalent arrangement included within the spirit and scope of the appended claims.